

**10 AUGUST 1993**



***Maintenance***

**MANAGING AEROSPACE EQUIPMENT  
MAINTENANCE**

---

**NOTICE:** This publication is available digitally on the SAF/AAD WWW site at: <http://afpubs.hq.af.mil>. If you lack access, contact your Publishing Distribution Office (PDO).

---

OPR: HQ USAF/LGMM (Maj J.D. Pauly)

Certified by: HQ USAF/LGM  
(Brig Gen William Douglass)

Pages: 6

Distribution: F

1. The Air Force must properly maintain aerospace equipment to meet operational needs. By carefully managing its maintenance programs, it makes the greatest amount of operable equipment available at a reasonable cost. This directive, therefore, outlines policies to ensure professional, top-quality maintenance throughout the Air Force.
2. This directive establishes the following policies. The Air Force will:
  - 2.1. Maintain aerospace equipment to the highest levels of availability. It will achieve these levels by prudently managing resources while meeting the need to mobilize, surge, and deploy.
  - 2.2. Maintain aerospace equipment strictly according to appropriate technical manuals.
  - 2.3. Provide high-quality, system-specific training for the certified technicians who ensure aerospace equipment is serviceable, safe, and available for sustained use.
  - 2.4. Track the condition and location of aerospace equipment.
  - 2.5. Develop, apply, and sustain preventive maintenance programs.
3. The following responsibilities and authorities are established:
  - 3.1. HQ USAF/LGM provides policy, advocates resources for, and oversees management of aerospace equipment maintenance. It also arranges cost-effective maintenance support within and between services, as well as on projects which require joint contracting. Finally, it determines each year whether the Air Force has the core capability to do depot maintenance to meet all military contingencies.
  - 3.2. Major commands (MAJCOM) using aerospace equipment must maintain it at the base level. MAJCOMs also train technicians on the job to ensure they can maintain equipment according to its technical specifications.
  - 3.3. Air Force Materiel Command (AFMC) provides to the MAJCOMs adequate support for logistics; engineering; and research, development, test, and evaluation. AFMC maintains configuration

control over the MAJCOMs' equipment and is the final determining authority for the content of associated technical orders. Also, AFMC oversees all depot-level maintenance activities and starts product improvements that make aerospace equipment more suitable for its operational use.

3.4. Air Training Command formally trains technicians to maintain aerospace equipment.

4. This directive implements policies outlined in Department of Defense (DoD) Directive 4151.18, *Maintenance of Military Materiel*, August 12, 1992; and DoD Directive 4660.2, *Communications Security (COMSEC) Equipment Maintenance and Maintenance Training*, June 3, 1992.

5. See [Attachment 1](#) for measures used to comply with this policy.

6. See [Attachment 2](#) for an explanation of terms.

7. See [Attachment 3](#) for a listing of related publications.

TREVOR A. HAMMOND, Lt General, USAF  
DCS/Logistics

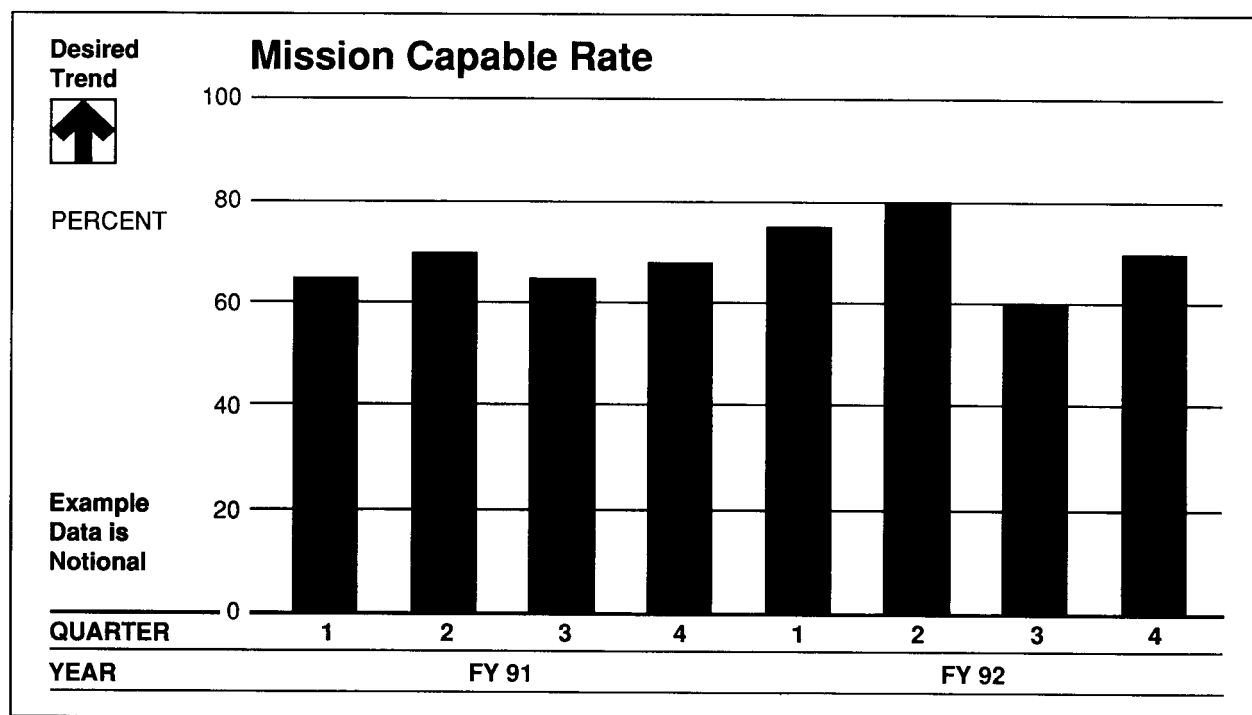
## Attachment 1

### MEASURING AND DISPLAYING COMPLIANCE WITH POLICY

**A1.1.** To measure the success of this policy, the system program director will determine the mission capable rate of the aerospace equipment by type (e.g., C-130, F-15, etc.). Sources for this measurement are the Reliability and Maintainability Information System (REMIS) and the Expanded Minuteman Data Analysis System (EMDAS). The results for selected systems are presented during the semiannual Weapon System Program Assessment Review (WSPAR).

**A1.2.** The WSPAR provides a baseline to compare availabilities of aerospace equipment. This baseline uses figures from at least the past three reporting periods, along with the current period, to provide a frame of reference on equipment availability ([Figure A1.1.](#)). The goal for each weapon system will be established by the using command.

**Figure A1.1. Sample Metric of Mission Capable Rate.**



## Attachment 2

### TERMS EXPLAINED

#### A2.1. Terms used in this policy are as follows:

A2.1.1. **Aerospace Equipment.** Equipment used and maintained to meet the Air Force mission. It includes aircraft, missiles, space equipment, communications-electronic equipment, avionics, engines, training equipment, support equipment, aerospace ground equipment, sound suppressor systems, test, measurement and diagnostic equipment, and major-end-items of all equipment.

A2.1.2. **Availability.** An expression of the percentage of time a piece of aerospace equipment is ready to perform at least some part of its intended work for its operational user. This percentage is expressed as a mission capable rate.

A2.1.3. **Base Level Maintenance.** On- or off-equipment repairs by an operational unit to support its own requirements. These repairs include removing, repairing, reinstalling, and replacing.

A2.1.4. **Core Capability.** Skills and resources maintained within repair depots to meet contingency requirements. Core comprises a minimum level of mission-essential capability within the Department of Defense (DoD). Normally, an assigned individual DoD agency must control it. For economic or strategic reasons, however, it may be a consolidated capability under the control of an assigned or jointly determined DoD component.

A2.1.5. **Depot Maintenance.** Maintenance which requires overhauling or rebuilding parts, assemblies, subassemblies, and end items. It may include manufacture of parts, modifications, testing, and reclamation. Depot maintenance supports base-level technicians by giving them technical help and doing any repairs beyond their responsibility. Depot maintenance also stocks serviceable equipment because it has more extensive repair facilities than are available elsewhere. Depot maintenance includes all software maintenance.

A2.1.6. **Depot Maintenance Activity.** A plant designated by the Department of Defense to do depot-level maintenance on weapon systems, equipment, and components.

A2.1.7. **Inter-Service Maintenance Support.** Any maintenance one military service does for another, using only Department of Defense employees.

A2.1.8. **Joint Contracting.** Maintenance a contractor does for more than one DoD component under a single contract administered by one component.

A2.1.9. **Materiel.** Hardware, equipment, and software associated with DoD weapon systems, including aircraft, spacecraft, automotive equipment, combat vehicles, construction equipment, electronics, communications systems, missiles, ships, ordnance, weapons, munitions, and general purpose equipment. Materiel also includes related spares, repair parts, and support necessary to equip, operate, and maintain military activities. These activities may be for administration, support, or combat.

A2.1.10. **Mission Capable (MC) Rate.** The percentage of time equipment could do any part of its designed work. AFI 21-101, *Air Force Aircraft and Equipment Maintenance Management*, has specific formulas for calculating MC rates.

A2.1.11. **Mobilization.** The act of assembling and organizing national resources to support national objectives during war or other emergencies. The process by which the Armed Forces, or part of them,

become ready for war or other national emergency. This process includes activating all or part of the Reserve, as well as assembling and organizing personnel, supplies, and materiel.

A2.1.12. **Product Improvement.** Conscientiously applied analysis and corrective action. The user identifies discrepancies in aerospace equipment and informs the responsible center for logistics support. The center analyzes and corrects these discrepancies either by improving procedures or by modifying or replacing equipment.

A2.1.13. **Surge.** Expanding the ability of an existing repair depot to meet increased requirements by adjusting shifts; adding equipment, spares, repair parts, and skilled people to increase the flow of repaired or manufactured materiel to the user; or adding serviceable storage.

### **Attachment 3**

#### **INTERFACING PUBLICATIONS**

AFI 21-101, *Maintenance Management of Aircraft* (formerly AFRs 66-1 and 66-33)

AFI 21-102, *Depot Maintenance Management* (formerly AFRs 66-3, 66-7, and 66-11)

AFI 21-103, *Aircraft, Missile, and Equipment Accountability* (formerly AFRs 65-110 and 66-12)

AFI 21-104, *Management of Propulsion Programs* (formerly AFM 400-1, V1, formerly AFRs 66-13, 400-1,V3)

AFI 21-105, *Air Force Fabrication Programs* (formerly AFRs 66-8, 66-25, 66-34, 66-38, 66-39, and 400-44)

AFI 21-107, *Maintenance of Special Air Mission (SAM) Aircraft* (formerly AFR 66-26)

AFI 21-108, *Maintenance Management of Space Systems*, No Former Publication

AFI 21-109, *Communications Security (COMSEC) Equipment Maintenance and Training* (formerly AFR 66-5)

AFI 21-110, *Engineering and Technical Services Management and Control* (formerly AFR 66-18)

AFI 21-112, *Aircraft Egress and Escape Systems* (formerly AFR 66-51)

AFI 21-113, *Air Force Metrology and Calibration (AFMETCAL) Program* (formerly AFR 74-2)

AFI 21-114, *Maintenance Management of Missiles*, No Former Publication

AFI 21-115, *Production Quality Deficiency Reporting Program* (formerly AFR 74-6)

AFI 21-116, *Communications-Electronics Maintenance Management* (formerly AFR 66-2)

AFI 21-118, *Product Improvement Program* (formerly AFR 66-30)